

FURTHER NOTES ON THE BOTANY OF LORD
HOWE ISLAND.

(Fifth Paper.*)

BY J. H. MAIDEN.

(Plate xxviii.)

Additional Bibliographical Notes.

1. MCGILLIVRAY, J.— Letters from, in Hooker's *New Journ. of Botany*, vi., 353 (1854).
2. Rev. W. B. Clarke's Presidential Address, *Proc. Roy. Soc. N.S.W.*, iv., 37 (1870).

The following extract from a letter, written by Mr. Charles Hedley, on the island during his visit in September, 1908, is very interesting. Both he and Mr. W. S. Dun collected botanical specimens freely, and presented the whole of their collections to the National Herbarium, Sydney.

“When I asked what I could do for you on Lord Howe Island, you replied that material from the high ground would be particularly acceptable.

“Mt. Gower forms a massive block, the flat summit of which, according to the guides, is only accessible by a spur running from the head of Erskine Valley, and as far as we could see, except at this point, the mountain is surrounded by tiers of huge wall-like precipices. It will illustrate the steepness of the track to say that the wild pigs have never been able to reach the summit, and that a dog, which accompanied us, had to be handed up from ledge to ledge over what the islanders call the ‘getting-up places.’

“The summit is a plateau of about 200 acres, which at a distance appears almost level. Actually, several small streams

* The other papers will be found in these Proceedings, xxiii., 112(1898); xxiv., 381(1899); xxvi., 156(1901); xxvii., 347(1902).

excavate the plateau into shallow valleys, and then discharge in waterfalls over tremendous cliffs. These little dells have a beneficent effect on the vegetation, since the plants here escape distortion and hedging by the wind, and grow in shelter to their natural proportions,

“Low trees about 20 feet in height, and shrubs, grow densely; the ground is hidden by interlacing bowers, and progress through them by stooping and crawling is slow and awkward. The tallest tree is *Dracophyllum (Fitzgeraldi)* which reaches a maximum height of 40 feet. Tree-ferns and palms, which are equally abundant, overtop the level of the scrub. Whereas the palms of the low lands are markedly gregarious, sometimes occupying tracts to the exclusion of other plants, the mountain palms grow here and there sporadically among the other trees.

“Abundant moisture was a dominant expression of the flora. ‘Here are cool mosses deep,’ though we cannot finish the Tennysonian verse. Trunks, particularly of tree-ferns, appeared as green columns, so clothed were they with moss or *Hymenophyllum*. Epiphytes straggled everywhere, and a large proportion of trees threw out adventitious roots. Ferns grew luxuriantly, taking the place of herbs. Indeed, a *Plantago (Hedleyi, n.sp., J.H.M.)* on the track, and a straggling large-leaved plant with composite flower-heads in the axils (*Elatostemma reticulatum*) were almost the only herbs seen.

“The lowland flora had, of course, almost disappeared, the banyan (*Ficus columnaris*) goes a short distance up the hill. The last stunted *Pandanus (Forsteri)* was left about the 2,000 feet zone. The *Exocarpus (homoclada)* is one of the few species I recognised as having an uninterrupted range from top to bottom. But the coast-flora has representatives. A small orchid replaces the beach-congener. A pepper grows taller, and has a larger, rounder leaf. Wilson says the mountain ‘kava’ has a red seed, but the lowland one a yellow.” (*Piper excelsum* is the only known kava).

Specimens of the following plants were brought from the summit of Mt. Gower :—*Drimys Howeana* F.v.M.; *Pittosporum erioloma* F.v.M. & C. Moore; *Dysoxylon pachyphyllum* Hemsl.;

Metrosideros nerrulosa C. Moore & F.v.M., a bush about 10 ft. (foliage only); *Coprosma putida* F.v.M. & Moore; *Randia stipularis* Ch. Moore & F.v.M.; *Brachycome segmentosa* F.v.M., about 600 feet below; *Olearia Balli* F.v.M.; *Olearia Mooneyi* F.v.M., (tree 15 feet, up to 8 inches diameter); *Senecio insularis* Benth.; *Tecoma austro-caledonica* Burm.; *Negria rhabdothamnioides* F.v.M., (about 10 feet; common on summit); *Plantago Hedleyi*, n.sp.; *Piper excelsum* Forst., (10 feet); *Exocarpus homoclada* Ch. Moore & F.v.M.; *Elatostemma reticulatum* Wedd., (this, and the *Plantago*, the only herbs growing on the summit); *Dendrobium gracilicaule* F.v.M.; *Luzula longiflora* Benth.; *Clinostigma Mooreanum* F.v.M., together with ferns.

Admiralty Islets.

Mr. Hedley writes:—"Hemsley* notes the lack of information on the flora of Ball's Pyramid and the Admiralty Islands. We landed on the largest of the Admiralty Islands for the purpose of gathering sea-birds' eggs. The flora proved uninteresting. There are no trees, but a few shrubs, not in flower, clinging to the steep north side. The southern slopes are set with scattered grass-tussocks among which the Wideawakes (*Sterna fuliginosa*) and Gannets (*Sula cyanops*) were laying their eggs. The grass happened to be in flower. Among the tussocks trailed the New Zealand Spinach and a *Mesembryanthemum*. There was a salt-bush, a giant sedge; and *Sonchus oleraceus* had established itself."

The plants collected by Mr. Hedley on the Admiralty Islet are:—*Lepidium foliosum* Desv., *Erechtites quadridentata* DC., *Mesembryanthemum equilaterale* Haw., *Tetragonia expansa* Murr., (N.Z. Spinach), *Cyperus hematodes* Endl., *Poa caespitosa* Forst., the common tussocky grass of the islands.

The following species is deemed to be new:—

PLANTAGINACEÆ.

PLANTAGO HEDLEYI, n.sp.

Slopes of Mount Gower, April, 1898. Leaf only (J.H.M.).

"Common on rocky ledges on the crest of Mt. Gower, 2,840ft." September, 1908 (C. Hedley and W. S. Dun).

* *Annals of Botany*, x., p.230(1896).

Top of Mt. Gower. December, 1910 (Dr. T. Harvey Johnston).
(The type).

Eastern face of Mt. Lidgbird. August, 1911 (Rev. W. W. Watts).

Herba perennis, radice lignosâ. Folia lanceolato-spathulata, 5-23 cm. longa, circa 3 cm. lata, superne basi pilosa parte majore glabra. Flores in spica 4-8 cm. longa, bractea exteriore carinata, margine ciliata, 5-6 mm. longa, superne basi pilosa. Sepala 4, margine scariosa, carinata, circiter 4 mm. longa. Corollæ tubus 4-locularis, nervo medio, margine leniter scariosâ, tubo corollæ lobis circiter bis æquilongis. Stamina 4, filamentis corollæ circiter bis æquilongis. Stylus simplex, breve pilosus, petala valde superans.

Capsulam maturam non vidi, operculo cum stylo persistente deciduente, ovulis placentæ liberæ centrali compressæ irregulariter spathulatæ adhærentibus.

A perennial with a woody root-stock.

Leaves lanceolate-spathulate, 2 to 9 inches long (say 5 to 23 cm.) with an average width, in the lanceolate portion, of 1 to 1½ inch (2½-4 cm.). The base of the leaf has tufts of long hairs on the inner side. The leaves as a whole are glabrous, with the exception of a slight sprinkling of silky hairs on some of them. *Flower-stalk* long and glabrous, with a few silky hairs under the spike, the spike exceeding the leaves. *Flowers*: spike 4-8 cm. long, outer bract keeled, with ciliate edge, from 5-6 mm. long with tuft of hairs at base inside. *Sepals* 4, with scarios margins, keeled, about 4 mm. long. *Corolla-tube* 4-lobed, with a central nerve and very slightly scarios margins. The tube is about twice as long as the corolla-lobes. *Stamens* 4, with filaments about twice as long as the corolla. Anthers cordate, the connective pointed at the top. *Style* simple, besprinkled with short hairs, greatly exceeding the petals. *Immature capsule* (ripe capsule not seen) opens circumsciss, the opercular portion falling off with the long persistent style, leaving the ovules attached to a compressed, irregularly spathulate, free central placenta.

Affinity.—It seems to come nearest to *P. aucklandica* Hook. f., a New Zealand species, but the latter seems to differ from *P.*

Hedleyi in the length of the leaves, which are only 5-10 cm. long, obscurely sinuate-dentate in *P. aucklandica* instead of entire, and usually much longer as in the new species.

The leaves of *P. aucklandica* are also ovate and obovate.

The ovarium in *P. Hedleyi* is much shorter than the calyx, and 5-7 seeded, instead of (?) twice the length of the calyx and 2-seeded in *P. aucklandica*. The placenta is also different in shape in *P. aucklandica*.

The circumsciss line is always visible round the ovarium in the new species.

CRUCIFERÆ.

CAPSILLA BURSA-PASTORIS Mœnch.

Mr. Hedley writes:—"In view of your note on *Capsella Bursa-Pastoris* (Proc. Linn. Soc. N. S. Wales, xxiii., 1898, p.121, footnote), I looked out for it. What seemed to be this, is marked as from Waterhouse's cultivation paddock." Mr. Hedley's surmise is correct.

LEPIDIUM FOLIOSUM Desv. (also on Ball's Pyramid) of my former paper (*op. cit.*, xxiii., p.123), is in A. Thellung's "Die Gattung *Lepidium* (L.) R.Br." (Zurich, 1906), called *L. Howe-insular* Thell., n.sp.

VIOLACEÆ.

HYMENANTHERA NOVÆ-ZELANDIÆ Hemsli., Kew Bulletin, 1908, p.96.

The species hitherto recorded for Lord Howe Island as *H. latifolia* Endl. (See Hemsley, Ann. Bot., x., 231).

Hemsley states that it differs from the New Zealand specimens in having apparently thinner leaves, as seen in the dried condition at least. The flowers are exactly the same.

ELÆOCARPACEÆ (formerly in Tiliaceæ).

ELÆOCARPUS sp. (These Proceedings, xxvii., 1902, 347).

"Mueller (Fragm., ix., 77) includes the genus *Elæocarpus* (Tiliaceæ): 'Elæocarpus foliatione, quæ tantum nota, E. foveolato similis,' but there is no specimen in any of the collections received at Kew." Hemsley, Ann. Bot., x., 232.

I had overlooked the above reference. We still have not sufficient material to determine this plant specifically.

MELIACEÆ.

DYSOXYLON PACHYPHYLLUM Hemsley.

The plant recorded as *D. Fraserianum* Benth., (*loc. cit.*, p.124) has been described by Hemsley as a new species. See Hemsley in *Icones Plantarum*, t.2827, and my *Forest Flora of New South Wales*, Part xxv., p.82, and Part xxx., p.173.

SAPINDACEÆ.

DODONÆA VISCOSA L.

D. lanceolata F.v.M., of Hemsley, *loc. cit.*, p.234, should be *D. viscosa* L., according to Prof. Radlköfer in a letter to me.

MYRTACEÆ.

ACICALYPTUS FULLAGARI F.v.M.

Further on the road (Erskine Valley—lower road) where the aneroid gave a level of 700-1800 feet, Mr. Hedley notes the "Scaly Bark" as fine large trees.

PRIMULACEÆ.

ANAGALLIS ARVENSIS L.

Collected on the Island by Mr. Hedley. It is a new record.

OLEACEÆ.

NOTELEA QUADRISTAMINEA Hemsley.

On entering the Erskine Valley by the "lower road," *i.e.*, the track along the Lidgbird cliffs, we came on a forest of Blue Plum (These Proceedings, xxiv., 1899, p.381).

BIGNONIACEÆ.

TECOMA AUSTRO-CALEDONICA Burm.

Mr. Hedley writes:—"In view of your note (These Proceedings, xxiii., 1898, p.132) on *Tecoma*, I put in a few flowers. Mr. Dun verified my observation that the Island plant is without any smell. I believe *T. australis* has an unpleasant odour." The Australian plants placed under the name *T. australis* R.Br., require further examination, and will probably be found to include more than one species. The coastal (Australian) form has sweet-scented flowers. The flowers of specimens from Mudgee, Werris Creek, and some other New South Wales localities, have an offensive smell, attracting blow-flies.

PIPERACEÆ.

PEPEROMIA AFFINIS Domin, in Queensland Agric. Journ. xxiv.,
222, 1910.

Prof. Domin told me verbally that the plant attributed to *P. reflexa* A. Dietr., from Lord Howe Island (see Hemsley, Ann. Bot., x., 249) is his *P. affinis*.

PALMEÆ.

HEDYSCEPE CANTERBURYANA F.v.M.

This Palm fruited for the first time in the Botanic Gardens, Sydney, in August, 1913. See a note of its flowering, together with a photograph, in these Proceedings, xxiv., 1899, p.382.

HOWEA BELMOREANA Becc. (These Proceedings, xxiii., 1898, p.137.

See a paper "Dichogamie Protérandre chez le *Kentia* (*Howea*) *Belmoreana*", par J. Daveau (Journal de Botanique, 16 Janvier, 1896).

PANDANACEÆ.

PANDANUS FORSTERI F.v.M. and C. Moore. (These Proceedings, xxiii., 1898, p.140.)

Warburg, in his monograph,* synonymised *P. Moorei* F.v.M., with *P. Forsteri*, as I had surmised. So that there is only one species on the island. He figures a drupe (Fig.13,E).

GRAMINEÆ.

PASPALUM DISTICHUM L.

In These Proceedings, xxiii., 1898, p.143, I pointed out that, in this grass, we had three and even four spikes, and suggested the name *anomalum* for this form. Mr. W. B. Hemsley (then of Kew) writes: "The production of three spikes is not a rare occurrence, and hardly justifies the distinction of this form as a variety."

FILICES.

The Rev. W. W. Watts has published a paper† on "The Ferns of Lord Howe Island," and I propose to leave the critical revision of the species to him.

* "Das Pflanzenreich" (Pandanaceæ).

† These Proceedings, xxxvii., 1912, 395.

I desire to thank Mr. E. Cheel for kind assistance in the preparation of this paper.

EXPLANATION OF PLATE XXVIII.

Plantago Hedleyi, n.sp.

- A, Small plant, natural size, showing woody root-stalk.
B, Flower. The calyx-lobes have scarious edges and a narrow keel; c, one lobe removed. The anthers cordate, the connective pointed at the top.
D, Bract, ciliate edge, tuft of hairs at the base inside; broadly keeled.
E, Flower-tube opened out, showing the attachment of the filaments between the lobes of the corolla.
F, Pistil.
G, Immature capsule.
H, The upper opercular portion of the capsule separated from the lower part, in which remains the free central placenta with from 5 to 7 ovules.
I, The placenta, showing the depressions where the ovules were attached.
K, Part of leaf from a larger plant, showing tufts of long hair at the base, on the upper side of the leaf.